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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,052	05/29/2001	Sunil Keshavji Vadgama	FUJL 18.168	7791
26304	7590	07/12/2005	EXAMINER	
KATTEN MUCHIN ROSENMAN LLP			WANG, TED M	
575 MADISON AVENUE			ART UNIT	
NEW YORK, NY 10022-2585			PAPER NUMBER	
			2634	
DATE MAILED: 07/12/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/857,052

Applicant(s)

VADGAMA ET AL.

Examiner

Ted M. Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 36-71 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 36,37,60,61,70 and 71 is/are rejected.
- 7) ☒ Claim(s) 38-59 and 62-69 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

1. The indicated allowability of claim 36-71 are withdrawn in view of the newly discovered reference(s) to US 5,493,307. Rejections based on the newly cited reference(s) follow.

### ***Claim Objections***

2. Claims 2 and 4 are objected to because of the following informalities:

- In claims 63 and 64, line 1, delete "any preceding".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 36, 37, 70, and 71 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsujimoto (US 5,493,307).

- With regard claim 36, Tsujimoto discloses a receiving apparatus comprising:  
a main beamformer which processes received signals (Fig.1 element 103),  
representing said transmission signal (Fig.1 elements 102<sub>1</sub>-102<sub>n</sub>), in accordance  
with a main beam pattern that is determined by beam control information applied  
thereto (Fig.1 element 122 and column 3 line 55 – column 4 line 40), said main

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beam pattern being adjusted as necessary during use of the receiving apparatus to facilitate reception of said transmission signal (column 3 line 55 – column 4 line 40);

an assistant beamformer which in an initial operating phase of the apparatus (Fig.1 elements 105<sub>1</sub>-105<sub>3</sub>, Fig.2 element 105), processes such received signals in accordance with each one of a plurality of different assistant beam patterns to derive one or more output signals corresponding to the assistant beam pattern concerned (Fig.1 element 108 inputs and column 3 line 55 – column 4 line 40), each such pattern being determined by beam control information corresponding individually thereto (Fig.1 elements 109-111 and Fig.2 elements 208<sub>1</sub>-208<sub>n</sub>); and a beam control information setting unit (Fig.1 elements 109-111 and Fig.2 elements 208<sub>1</sub>-208<sub>n</sub>) which employs said output signals and said beam control information corresponding respectively to said assistant beam patterns (Fig.1 elements 105<sub>1</sub>-105<sub>3</sub>, Fig.2 element 105) to make an initial estimate of said beam control information for said main beamformer (Fig.1, Fig.5, column 3 line 55 – column 4 line 40, columns 7-10, and column 13 lines 13-67).

- With regard claim 37, Tsujimoto further discloses wherein said assistant beamformer has a plurality of individual assistant beamformer units that are operable simultaneously to process said received signals in accordance with different respective ones of said assistant beam patterns (Fig.1 elements 105<sub>1</sub>-105<sub>3</sub>, and Fig.2 element 105).

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- With regard claim 70, which is a method claim related to claim 36, all limitation is contained in claim 36. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 71, which is a receiving apparatus means function claim related to claim 36, all limitation is contained in claim 36. The explanation of all the limitation is already addressed in the above paragraph.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 60 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsujimoto (US 5,493,307) in view of Bernard (US 2002/0032004).

- With regard claims 60 and 61, Tsujimoto discloses all of the subject matter as described in the above paragraph except for specifically teaching wherein said transmission signal is a CDMA/TDMA signal.

However, Bernard teaches wherein said transmission signal is a CDMA/TDMA signal (paragraph 83).

It is desirable that the transmission signal is a CDMA/TDMA signal so as to improve the efficiency (paragraph 83). Therefore, It would have been obvious to

one of ordinary skill in the art at the time of the invention was made to include the apparatus as taught by Bernard in which, the transmission signal is a CDMA/TDMA signal, applied into Tsujimoto's receiving apparatus so as to improve efficiency.

***Allowable Subject Matter***

7. Claims 38-59 and 62-69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is 571-272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ted M Wang  
Examiner  
Art Unit 2634

Ted M. Wang

A handwritten signature in black ink, appearing to read "Shuwang Liu".

**SHUWANG LIU**  
**PRIMARY EXAMINER**